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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,412	01/29/2004	Charlie Steinmetz	200209323	6968

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HEWLETT-PACKARD COMPANY  
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EXAMINER	
MARTIN, LAURA E	
ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/768,412

Applicant(s)

STEINMETZ ET AL.

Examiner

Laura E. Martin

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/19/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4-9, 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Childers et al. (6619789).

As per claims 1 and 2, Childers et al. teaches a printing fluid container (10) comprising: an off-axis printing fluid reservoir (12) configured to hold printing fluid; a printing-fluid interface configured to output printing fluid from the printing reservoir (30); and an air-interface configured to regulate pressure within the printing fluid reservoir (28), wherein the printing-fluid reservoir includes a leading edge (50), and wherein the printing-fluid interface and the air-interface are on the leading edge.

As per claims 4-8, Childers et al teaches the leading edge (50) having a substantially planar profile formed by a single structural piece, the air-interface (28) is above the printing-fluid interface (30) on the leading edge of the printing fluid reservoir (Fig 1), and the printing-fluid interface and air-interface are configured to laterally (through 14) input and output the printing fluid.

As per claims 9 and 11, Childers et al. teaches the printing fluid interface including a ball (124) and septum (122) assembly and the printing-fluid interface and the air-interface are respectively configured to block the input and output of printing fluid and air unless engaged by a fluid connector (C7, L35-63).

As per claims 12, 13, 15-20, 24, 25, 26-28, 32, and 35-40, Childers et al. teaches a printing fluid container (10) comprising: an off-axis printing-fluid reservoir (12) configured to hold printing fluid; a printing-fluid interface (30) on the printing-fluid reservoir with a leading edge (50) wherein the printing fluid interface is configured to output printing fluid (fluid outlet) from the printing-fluid reservoir during a first mode of operation and is configured to input printing fluid into the printing-fluid reservoir during a second mode of operation (C13, L43-47); and an air-interface (28) on the printing-fluid reservoir, wherein the air-interface is configured to actively regulate the pressure within the printing-fluid reservoir (by compressor 16) by inputting and outputting air into and from the printing-fluid reservoir during operation. Childers et al also teaches the leading edge (50) having a substantially planar profile formed by a single structural piece, the air-interface (28) is above the printing-fluid interface (30) on the leading edge of the printing fluid reservoir (Fig 1), and the printing-fluid interface and air-interface are vertically aligned above the printing fluid interface on the leading edge of the printing-fluid reservoir (Fig 1) and configured to laterally (through 14) input and output the printing fluid. Childers et al. also teaches the printing-fluid interface including a ball (124) and septum (122) assembly, the printing-fluid interface configured to receive a fluid connector (30) that is in fluid communication with a printing-fluid ejector (14) upon

installation of the printing-fluid container into a printing system (10), a printing fluid-interface configured to deliver printing fluid (20) to the printing fluid ejector via the fluid connector during the first mode of operation, and the printing-fluid interface and the air-interface are respectively configured to block the input and output of printing fluid and air unless engaged by a fluid connector (C7, L35-63).

As per claims 35-37, Childers et al. teaches a printing-fluid container, comprising: reservoir means for holding a printing fluid (12); means for laterally outputting printing fluid from the reservoir (26) means during a first mode of operation and for laterally inputting fluid into the reservoir means during a second mode of operation (C13, L40-46); and means for regulating pressure (16) within the reservoir means by laterally inputting air and outputting air into and from the reservoir. Childers also teaches means for laterally outputting printing fluid vertically aligned below means for regulating pressure (Fig 1) arranged in a single structural piece.

As per claims 38-40, Childers et al. teaches a method of supplying printing fluid, comprising: storing printing fluid in a reservoir (12) having an air-interface (28) and a printing-fluid interface (30); allowing printing fluid to exit the reservoir through the printing-fluid interface and allowing the air to enter the reservoir through the air interface during a first mode of operation; and allowing printing fluid to return to the reservoir through the printing-fluid interface (C13, L40-46) and allowing air to exit the reservoir through the air interface (with compressor 16) during a second mode of operation. Childers also teaches Childers also teaches means for laterally outputting printing fluid vertically aligned below means for regulating pressure (Fig 1) arranged in a single

structural piece, and allowing printing fluid to return to the reservoir includes laterally returning printing fluid to the reservoir (C13, L40-46).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Childers et al. (6619789) in view of Steinmetz et al. (US 6488369).

Childers et al. teaches the apparatus of claims 2 and 13; however, it does not teach a lateral insertion into a printer.

Steinmetz et al. teaches the printing-fluid reservoir being configured for lateral insertion into a printing system.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the disclosures of Childers et al. and Steinmetz et al. to minimize the amount of space needed for the ink cartridge.

Claims 10, 22, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Childers et al. (6619789) in view of Hsu et al. (US 2002/0071013).

As per claims 10 and 29, Childers et al. teaches the apparatus of claim 1, as well as a septum in the air-interface; however, it does not teach a ball and septum assembly in the air-interface. Hsu et al. teaches a ball (243) and septum (241) assembly.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the disclosures of Childers et al. and Hsu et al. in order to protect the ink cartridge.

As per claim 22, Childers et al. teaches an air-interface (28) configured to regulate pressure within the printing fluid reservoir; however, it does not teach the atmospheric pressure being above ambient levels.

Hsu et al. teaches operating pressure above an ambient atmosphere pressure (P7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the disclosures of Childers et al. and Hsu et al. to increase the ease of printing.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Childers et al. (6619789) in view of Pawlowski, Jr. et al. (US 6779875).

Childers et al. teaches an air-interface configured to regulate pressure within the printing-fluid (132) reservoir; however, it does not teach an operating pressure equivalent to atmospheric pressure.

Pawlowski, Jr. et al. teaches an operating pressure equivalent to atmospheric pressure (C1, L66+).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the disclosures of Childers et al. and Pawlowski, Jr. et al. to reduce the risk of damaging the printhead.

Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Childers et al. (6619789) in view of Struder et al. (US 6905198).

Childers et al. teaches an air-interface configured to regulate pressure (16) within the printing-fluid reservoir as well as a fluid connector (104); however, it does not teach a venting assembly.

Struder et al. teaches a venting assembly (30).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the disclosures of Childers et al. and Struder et al. to increase the quality of the apparatus.

Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Childers et al. (6619789) in view of Steinmetz et al. (US 6488369) and Hsu et al. (US 2002/0071013).

As per claims 33 and 34, Childers teaches a printing fluid container (10) comprising: an off-axis printing-fluid reservoir (12) configured to hold printing fluid; a ball (124) and septum (122) printing-fluid interface on an upright leading edge (50) of the printing-fluid reservoir, wherein the printing-fluid interface is configured to output printing fluid from the printing-fluid reservoir (12) during first mode of operation and is configured to input fluid into the printing-fluid reservoir during a second mode of operation (C13, L40-46); and an air-interface (28) configured to regulate pressure within the printing-fluid reservoir by inputting air into the printing-fluid reservoir during the first mode of operation and by outputting air from the printing-fluid reservoir during the second mode of operation; wherein the printing-fluid interface and the air-interface are configured to



block input and output of printing fluid and air until the printing-fluid container is installed and a first fluid connector engages the printing fluid-interface and a second fluid connector engages the air-interface (C7, L35-63). Childers et al. also teaches a single structural piece forming the upright leading edge of the printing-fluid reservoir. Childers et al. does not teach a container laterally installed into a printing system or a ball and septum air-interface.

Steinmetz et al. teaches an upright leading edge (C12, L34-35) and a container that is laterally installed into a printing system.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the disclosures of Childers et al. and Steinmetz et al. to minimize the amount of space needed for the ink cartridge.

Hsu et al. teaches a ball (243) and septum (241) for air-interface vertically aligned.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the disclosures of Childers et al. and Hsu et al. in order to protect the ink cartridge.

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Childers et al. (6619789) in view of Needham (US 4658268).

Childers et al. teaches the printing fluid returning to the reservoir (C13, L40-46); however, it does not teach returning fluid to contain at least one of air or froth.

Needham et al. teaches the returning of a mixture of ink and air (C2, L55-57).

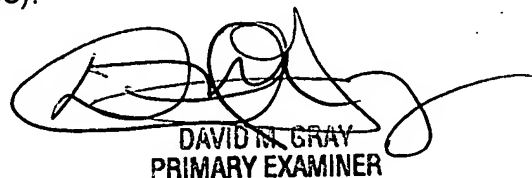
It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the disclosures of Childers et al. and Needham to improve printing quality.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David M. Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Laura E. Martin



DAVID M. GRAY  
PRIMARY EXAMINER